

Table A-19. Total (Federal plus company and other) funds for industrial R&D performance in the U.S. as a percent of net sales of companies that performed industrial R&D in the U.S., by industry and size of company: 1999-2001

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Industry and size of company	NAICS codes	1999 ¹	2000	2001 ²
		Percent		
Distribution by industry:				
All industries	21-23, 31-33, 42, 44-81	3.7	3.8	4.1
Manufacturing	31-33	3.7	3.6	4.0
Food	311	0.4	(D)	0.5
Beverage and tobacco products	312	(D)	0.7	0.4
Textiles, apparel, and leather	313-16	0.7	(D)	(D)
Wood products	321	0.5	0.8	1.1
Paper, printing and support activities	322, 323	(D)	(D)	(D)
Petroleum and coal products	324	0.4	(D)	(D)
Chemicals	325	5.2	5.9	4.9
Basic chemicals	3251	2.1	2.4	2.2
Resin, synthetic rubber, fibers, and filament	3252	(D)	5.6	(D)
Pharmaceuticals and medicines	3254	(D)	(D)	7.8
Other chemicals	325 minus (3251-52, 3254)	(D)	(D)	(D)
Plastics and rubber products	326	1.9	(D)	(D)
Nonmetallic mineral products	327	(D)	1.8	2.4
Primary metals	331	0.4	0.5	0.7
Fabricated metal products	332	1.5	1.4	1.7
Machinery	333	3.5	3.9	4.3
Computer and electronic products	334	10.3	9.0	12.4
Computers and peripheral equipment	3341	(D)	6.5	(D)
Communications equipment	3342	12.0	9.9	17.0
Semiconductor and other electronic components	3344	8.3	7.5	10.6
Navigational, measuring, electromedical, and control instruments	3345	15.2	12.0	12.6
Other computer and electronic products	334 minus (3341-42, 3344-45)	(D)	4.3	(D)
Electrical equipment, appliances, and components	335	(D)	(D)	3.1 (S)
Transportation equipment	336	4.2	4.0	4.2
Motor vehicles, trailers, and parts	3361-63	(D)	(D)	(D)
Aerospace products and parts	3364	8.8	7.3	5.7
Other transportation equipment	336 minus (3361-64)	(D)	(D)	(D)
Furniture and related products	337	0.7	0.8	0.9
Miscellaneous manufacturing	339	5.7	8.7	6.6
Medical equipment and supplies	3391	(D)	(D)	(D)
Other miscellaneous manufacturing	339 minus (3391)	(D)	(D)	(D)
Other manufacturing	31-33 minus (311-16, 321-27, 331-37, 339)	--	--	--

See explanatory information and SOURCE at end of table.

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		Percent		
Distribution by industry:				
Nonmanufacturing	21-23, 42, 44-81	3.7	4.1	4.3
Mining, extraction, and support activities	21	(D)	1.0	(D)
Utilities	22	0.1	(D)	0.0
Construction	23	3.1	(D)	1.4
Trade	42, 44, 45	5.5	5.3	6.2
Transportation and warehousing	48, 49	0.5	(D)	2.5
Information	51	3.6	4.1	(D)
Publishing	511	13.4	16.3	15.1
Newspaper, periodical, book, and database	5111	2.0	2.0	2.7
Software	5112	16.8	20.5	19.4
Broadcasting and telecommunications	513	(D)	0.5 (S)	(D)
Radio and television broadcasting	5131	(D)	(D)	(D)
Telecommunications	5133	(D)	(D)	(D)
Other broadcasting and telecommunications	513 minus (5131, 5133)	(D)	(D)	(D)
Other information	51 minus (511, 513)	(D)	5.1	(D)
Finance, insurance, and real estate	52, 53	(D)	1.2	(D)
Professional, scientific, and technical services	54	15.3	18.7	16.8
Architectural, engineering, and related services	5413	10.1	10.8	7.5
Computer systems design and related services	5415	(D)	12.3	17.4
Scientific R&D services	5417	45.3	42.9	47.7
Other professional, scientific, and technical services	54 minus (5413, 5415, 5417)	(D)	6.6	2.4
Management of companies and enterprises	55	(D)	4.4	7.8
Health care services	621-23	6.5	3.2	4.2
Other nonmanufacturing	56, 61, 624, 71, 72, 81	(D)	1.0	1.5

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Industry and size of company		1999 ¹	2000	2001 ²
		Percent		
Distribution by size of company: [Number of employees]				
Total		3.7	3.8	4.1
5 to 24		18.2	19.9	15.0
25 to 49		11.5	14.0	11.2
50 to 99		14.2	12.1	11.2
100 to 249		7.6	8.7	11.6
250 to 499		6.3	6.7	8.6
500 to 999		4.4	5.0	6.0
1,000 to 4,999		3.2	3.6	4.3
5,000 to 9,999		2.6	2.4	2.8
10,000 to 24,999		2.8	3.2	3.6
25,000 or more		3.6	3.4	3.4

¹ Some percentages for 1999 have been revised since originally published.

² Beginning with 2001, statistics for total and Federally funded industrial R&D exclude data for Federally Funded Research and Development Centers (FFRDCs).

KEY: (D) = Data have been withheld to avoid disclosing operations of individual companies.
(-) = Indicates data not collected.

NOTES: For 1999, 2000, and 2001, the frame from which the statistical samples were selected was divided into two partitions based on total company employment. In the manufacturing sector, companies with employment of 50 or more were included in the large company partition. In the nonmanufacturing sector, companies with employment of 15 or more were included in the large company partition. Companies in the respective sectors with employment below these values, but with at least 5 employees, were included in the small company partition. The purpose of partitioning the sample this way was to reduce the variability in industry estimates largely attributed to the random year-to-year selection of small companies by industry and the high sampling weights that sometimes were assigned to them. Because of this, in prior reports detailed industry statistics were published only from the large company partition; detailed industry statistics from the small company partition were not. Statistics from the small company partition were included in the manufacturing, nonmanufacturing, and all industries totals, but were aggregated into "small manufacturing" and "small nonmanufacturing" classifications instead of being included in their respective industry classifications. For this report, this practice was evaluated and discontinued because it was determined that the data for small companies are more useful if they are included in their respective industries even given the sampling concerns described above. Consequently, the "small manufacturing" and "small nonmanufacturing" stublines are no longer present. For 1999 and 2000, statistics previously published for the firms in the small company classifications are not shown separately in this table, but are included in the manufacturing, nonmanufacturing, and all industries totals. For more information, see the technical notes in Survey of Industrial Research and Development Methodology: 2001 at <http://www.nsf.gov/sbe/srs/sird/start.htm>.

SOURCE: National Science Foundation/Division of Science Resources Statistics, Survey of Industrial Research and Development: 2001